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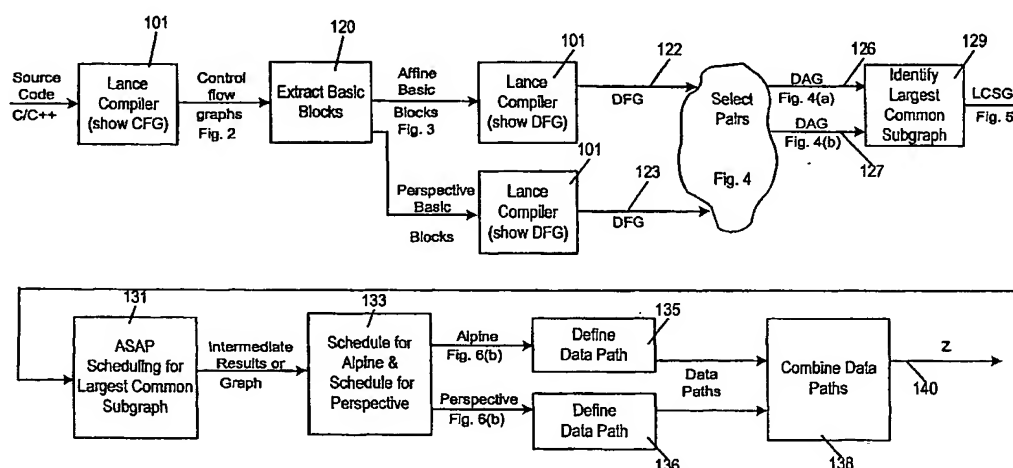
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[Continued on next page]

(54) Title: **RECONFIGURABLE PROCESSING**



(57) **Abstract:** A method of producing a reconfigurable circuit device for running a computer program of moderate complexity such as multimedia processing. Code for the application is compiled into Control Flow Graphs representing distinct parts of the application to be run. From those Control Flow Graphs are extracted basic blocks. The basic blocks are converted to Data Flow Graphs by a compiler utility. From two or more Data Flow Graphs, a largest common subgraph is determined. The largest common subgraph is ASAP scheduled and substituted back into the Data Flow Graphs which also have been scheduled. The separate Data Flow Graphs containing the scheduled largest common subgraph are converted to data paths that are then combined to form code for operating the application. The largest common subgraph is effected in hardware that is shared among the parts of the application from which the Data Flow Graphs were developed. Scheduling of the overall code is effected for sequencing, providing fastest run times and the code is implemented in hardware by partitioning and placement of processing elements on a chip and design of the connective fabric for the design elements.



GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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